The Cornbelt Education Review
A Graduate Student Journal

Department of Elementary & Early Childhood Education
College of Education
University of Illinois
Urbana, Illinois

Volume 2 Number 1

PREFACE

This is the second issue of the Cornbelt Education Review. We hope that you will find it interesting and we welcome you to communicate your reactions to us.

The Cornbelt Education Review is designed to encourage preparation of articles, refinement of editorial skills, and use of various research methodologies. It is also our aspiration that the Cornbelt Education Review will spark further exchange of ideas among students and faculty members in various departments of the College of Education.

We would like to express our appreciation for the support of our Department Chairman, John McGill and our Journal Advisor, Bernard Spodek.

The Editors,

JoAnne D'Alo Broadbent

Larry Colker

James Hoot

Karen Margolis

Elizabeth Rosen

Peter Winograd

INTRODUCTION

This, the second issue of the Cornbelt Education Review, once again serves a most important purpose in providing a journal for the presentation of the scholarly works of graduate students in the Department of Elementary and Early Childhood Education at the University of Illinois. The articles, research reports and the reviews contained in this issue were authored, selected and edited by graduate students in the Department. Moreover, all the details and responsibilities for the publication and distribution of the journal have been handled by them. They deserve commendation for their scholarship, professional zeal and industry.

Graduate students in early childhood education have contributed significantly to both the content of this issue and its preparation for publication. Therefore, it is more appropriate that Professor Bernard Spodek, one of the professions most outstanding leaders in early childhood education, has written a letter of introduction in preface to the contents of this issue.

John E. McGill, Chairman and
Professor of Elementary and
Early Childhood Education

Students in Music have the opportunity to display their work through recitals. Art shows serve a similar purpose for students of Art. In both cases a number of purposes are served. Students can demonstrate their competence publicly. In addition, the preparation for a show or recital requires the application and discipline needed of mature professionals.

The Cornbelt Review serves a similar function for graduate students in Elementary and Early Childhood Education. While the articles that follow are varied in topic and format, they all demonstrate a high degree of scholarship and authorship. Future issues will provide opportunities for the graduate students to share their work. The content of this and the previous issue has set a standard for the contributors to meet.

Bernard Spodek
Professor of Elementary and
Early Childhood Education

THE CORNBELT EDUCATION REVIEW

Volume II Issue 1
Spring 1979

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The Cornbelt Education Review is sponsored by the Department of Elementary and Early Childhood Education at the University of Illinois.

INTERRELATIONSHIPS IN THE FIELD EXPERIENCE FOR EARLY CHILDHOOD STUDENT TEACHERS

William Ade

Although empirical findings concerning the relative benefit of the pre-service field experience are inconclusive (Peck and Tucker, 1973), "professional opinion" continues to be a potent source of support for the continuation and expansion of the student teaching component in teacher education. Popularity of the field experience, however, does not resolve issues that revolve around the questions of what exactly constitutes a "good" site for the student teaching experience and which sites are "good" for what kinds of students under what circumstances. A recent study at the University of Illinois attempted to explore some of these issues.

In that project, Becher (1976) secured ratings on 31 pre-service students from their college instructors. These ratings were based upon the instructor's impressions of the student's strengths and probability of success in the student teaching experience. The practicum sites at which the students were assigned for their field experience were also rated by an instrument which assessed the quality of the sites in terms of modeling of teacher behavior, feedback to the pre-service student teacher, and the opportunity for the student teacher to practice and refine skills in actual classroom practice.

The study then compared the initial strengths of the students, the characteristics of assigned sites, and a final evaluation of the students after the experience was completed. Findings of the study suggested "...that an interrelationship of placement types and student's strengths may exist. In addition, it also suggests that greater attention needs to be directed to this criteria when making decisions concerning the assignments of students to specific sites." (Becher, 1976)

The present study is viewed as a replication and expansion of Becher's original work in an effort to explore the assertion that an interrelationship may exist between students strengths, placement site characteristics, and success of the student teaching experience.

Two major hypotheses guide the present inquiry:

1. A relationship exists between the student's strengths and potential as a teacher, the characteristics of the placement sites at which they experience their practicum, and final performance rating.

2. Student teachers maintain their initial strength rating derived from pre-field experiences classifications regardless of the characteristics of the placement site.

PROCEDURES

In the fall semester of the 1977-78 school year, twenty four female students from the University of Illinois were selected to participate in this study. These students were enrolled in a course that was designed to develop a conceptualization of teaching and the role of the teacher in developing and implementing programs in early childhood education. This class also included a thirty two-day field experience. The twenty four subjects were divided equally into two sections (Group A and Group B) according to assigned supervisors.

The placement sites used in this study were day care centers, University laboratory schools, nursery schools, and public school classrooms located in the cities of Champaign and Urbana, Illinois.

Two instruments were developed to collect data for this study. The Initial Student Strengths Rating was a twenty eight item instrument related to seven areas of student skills that were identified and weighted in importance by the Early Childhood Teacher Education program staff. The areas were ranked in the following order: Attitudes and Insights; Planning; Implementation; Organization; Provisioning; Evaluation; and Personal Qualities.

The second instrument, the Placement Site Assessment instrument was a revised version of Becher's earlier model. The staff of the Early Childhood Teacher Education program were requested to weight the importance of the three characteristics of this instrument in providing effective learning experiences for the student teacher. These characteristics were: modeling of good teacher behavior; feedback to the student teacher; and opportunity for the student to exhibit innovation. After ranking these characteristics 50% of the measurement items were assigned to the highest ranking characteristic (Modeling), 30% of the items were given to the second ranking characteristic (Feedback)

and 20% of the items to the Opportunity characteristic. The PSA instrument was completed by the two University supervisors towards the conclusion of the field experience.

The final evaluation of the student's field experience was drawn from the instructor's three observations of the student. The evaluators considered the amount of growth and the final level of competency exhibited by the student teacher in the field experience and ranked the subjects from "most successful" to "least successful."

RESULTS

A Spearman Rank-Correlation Coefficient was computed to determine the relationship between Placement Site rankings and the Final Performance rankings and a comparison of the ISSR rankings and the Final Performance rankings. Table 1 presents data on the relationship between site characteristics and final ranking.

Table 1

Relationship Between Site Characteristics and Final Ranking

Relationship	A Group	B Group
Modeling-Final Rank	.64 S*	-.11 NS
Feedback-Final Rank	.53 S*	-.11 NS
Opport. -Final Rank	.52 S*	.45 NS
Total - Final Rank	.70 S*	-.14 NS

* $p < .05$

The relationship between the Site characteristics and the student's Final Ranking in Table 1 were significant at the .05 level for Group A but not for Group B, which suggests that students from Group A were placed in better sites, scored higher in the final performance ranking. Results for Group B were non-significant.

The relationship between the Initial Student's Strengths and the student's Final Ranking (Table 2) were significant at the .05 level for both Group A and Group B. Examination of the ISSR subscores indicated that the areas of Planning; Organizing, Provisioning; and Personal Qualities were generally the best predictors of final ranking.

Table 2

The Relationship Between Initial Student Strengths and Final Ranking

Relationship	A Group	B Group
Planning - Final Ranking	.70 S*	.59 S*
Organiz. - Final Ranking	.54 S*	.52 S*
Provision - Final Ranking	.51 S*	.59 S*
Evaluation - Final Ranking	.13 NS	.47 NS
Implement. - Final Ranking	.45 NS	.58 S*
Att. & In. - Final Ranking	.14 NS	.51 S*
Person.Q. - Final Ranking	.65 S*	.57 S*
Total ISSR - Final Ranking	.54 S*	.57 S*

*p <.05

A comparison was made of the intial ratings assigned to the students, the ratings of the placement sites and the student's final rating to investigate the types of changes exhibited by the student during the field experience. The results are presented in Table 3.

Table 3

Student's in a Variety of Sites

Student's ISSR	Site Rating	Final Ranking
Outstanding	Very Good	Outstanding
Outstanding	Outstanding	Outstanding
Outstanding	Good	Fair
Outstanding	Fair	Outstanding
Very Good	Outstanding	Outstanding
Very Good	Outstanding	Outstanding
Very Good	Outstanding	Very Good
Very Good	Fair	Good
Fair	Good	Fair
Fair	Good	Fair
Fair	Outstanding	Fair

The results seem to indicate that student's who were initially rated "outstanding", maintained this rating regardless of the type of site they experienced their field practicum. Student's initially rated "very good" improved their rating when placed in "outstanding" sites, but decreased their rating when placed in "fair" sites. And, student's initially rated as "fair" maintained their rating, regardless of the site characteristics.

DISCUSSION

The results derived from this study must be discussed in light of the limitations placed on it by several factors. The list includes such influences as: (1) the small sample size (2) the measurement instruments were not tested for validity and (3) the University supervisors were not tested on inter-rater reliability.

The results indicate that a relationship may exist between certain student strengths and skills and the student's final ranking for student teaching success. Group A exhibited a significant correlation for four of the seven areas while Group B showed significant correlation in six of the seven areas. Planning skills appeared to be the strongest predictor of final student ranking (Group A r=.70, Group B r=.59), while Personal Qualities (Group A r=.65, Group B r=.50) and Provisioning skills (Group A r=.51, Group B r=.59) followed closely.

The relationship between site characteristics and final ranking of the student was significant only for Group A ($p < .05$). This may suggest that the University supervisors used different criteria for judging modeling behavior of the cooperating teacher; feedback to the student teacher; and the opportunity for the student teacher to innovate. Therefore, future research efforts should include training of supervisors in identifying similar characteristics of the placement site in an effort to minimize the influence of this factor.

The results that suggest that certain students maintain their pre-field experience ratings regardless of the characteristics of their student teaching placement site are less clear. A Pearson Product-Moment Correlation on the data in Table 3 produced a non-significant correlation ($r=.45$). Yet the trends reported by the results are very similar to Becher's findings, that some comment should be directed to these findings.

What makes this finding interesting is that Becher's work involved two sets of students who were in their second field experience, while the present study involved students in their first field experience. Even though the subjects studied were at different stages in the development of a student teacher, the findings suggest very similar trends.

In general, the findings in the present study tend to support Becher's assertion that students may be affected in predictable degrees by the types of placement sites at which they engage their pre-service field experience. If such a relationship exists in the more general population, one issue should be considered by those individuals who supervise programs for student teaching.

Directors of student teaching at teacher training institutions often deal with the ethical question surrounding the assignment of students to field placement sites. With only a limited number of "outstanding" sites available, does the director place the weaker students in these sites with hope that the experience will increase their skill level, while assuming that the most competent students can survive a poor placement site with their strengths intack? Or, does the director use these "outstanding" sites to aid the students who are already strong, but could develop even stronger abilities if placed in a superior site?

The findings of Becher and the present investigation suggest that perhaps a more conscious assignment procedure for student teachers may be advisable. It supports the possibility that even when a limited number of superior sites are available, student teachers can be assigned in a manner that will place the most susceptible students in sites that might influence their development in the most positive way.

SUMMARY

The present study sought to investigate the existence of interrelationships in the field experience for student teaching. Results indicate that 1) Planning skills, Personal Qualities, and Provisioning skills are strong predictors of final student ranking; 2) students initially rated as "outstanding" or "fair" maintained these ratings regardless of the type of site they engaged their field experience, and; 3) students initially rated as "very good" increased their rating when placed in "outstanding" sites and decreased their rating when placed in "fair" sites.

In conclusion, this study suggests that an interrelationship may exist between student strengths and placement site types, and that understanding this relationship could contribute to resolving some ethical questions surrounding the assignment of student teachers to placement sites.

Appendix A

Basic Data of the Initial Student Strength Rating

	Plan	Organ.	Prov.	Eval.	Impl.	Att.&In.	Pers.Q.	Total
A Group (n=12)								
$\bar{X}$	15.69	12.80	9.26	9.43	16.24	19.96	6.38	89.79
S.D.	2.11	1.35	.78	.31	1.34	2.18	1.22	7.93
B Group (n=12)								
$\bar{X}$	18.09	14.56	10.52	10.78	17.62	20.59	7.18	99.37
S.D.	1.19	1.28	.96	.84	1.52	2.67	.85	9.02

Appendix B

Basic Data of the Placement Site Assessment

A Group (n=12)	Modeling	Feedback	Opportunity	Total
$\overline{X}$	84.87	48.91	34.25	168.04
S.D.	15.08	10.79	3.98	26.64
B Group (n=12)				
$\overline{X}$	83.54	40.83	32.41	156.79
S.D.	14.92	10.30	4.06	25.32

Appendix C

Basic Data of the Final Ranking

Final Ranking	Rating	n
Upper third	outstanding	8
Middle third	very good	8
Lower third	good - fair	8

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DAY CARE & ATTACHMENT

Judy Cowger

The infant-mother relationship has been of interest to families throughout human history. However, within the last several decades, this relationship has also gained the attention of researchers. This interest has been stimulated by a variety of factors, both theoretical and practical. One such practical factor has been the increase in maternal employment in this country and the growing number of infants being cared for outside the home. This paper will review the research concerning the social-emotional aspect of the infant-mother relationship which is most generally referred to as attachment. It will also consider the implications of that research for the steadily growing field of infant day care.

"Attachment" is usually used to describe the unique relationship which typically forms between a human infant and its primary caretaker. Bowlby (1969) sees attachment as behavior that maintains or restores proximity to another individual and suggests that to be taken as evidence of attachment, behavior toward objects of attachment must be different from behavior toward other individuals in the same setting. Research in the area has assumed that attachment does represent a typical human behavior. Early work focused on what causes attachment to occur, with an emphasis on the role of internal mechanisms, particularly the critical period concept. In more recent research, emphasis has shifted to more developmental questions, such as how attachment may differ at different phases of development. The present focus of research is more on the role of environment, particularly on maternal behaviors which may interact with the infant's maturation to produce attachment in a reciprocal relationship.

Development of Attachment

Early research on the development of attachment grew out of ethological theory and stressed the comparison with imprinting in animals. Maccoby and Masters (1970) summarized the research on timing and concluded that attachment to mother reaches its peak at about nine months in the typical child. Bowlby (1969) has changed previous interpretations of his own to suggest that the most critical time may not be in the first year, but rather in the second or third years of life. While the critical period data are not conclusive as to a precise time, the principle of the primacy of relationship in the first year of a child's life remains largely accepted. More recent theories may stress cognitive and learning elements more strongly, but the instinctive

element of attachment, while largely accepted, remains to be proven or disproven.

An extension of the critical period viewpoint is found in the work of Schaffer and Emerson (1964). It suggested that the nature of attachment changes over the first 18 months of development. In a longitudinal study of 60 Scottish babies ranging in age from 21-78 weeks, observed monthly in their homes over a period of 1½ years, they found the following phases: 1) Indiscriminate attachment-up to about 7 months. These children might protest at being put down or separated, but seemed to make no distinction between experimenter and mother in this regard. 2) Specific attachment- beginning at about 7 months and becoming quite intense for the next 3 or 4 months. Attachment to just one person, usually mother, showing distress when mother leaves or puts infant down. Fear of strangers usually arrives about one month after this phase begins. Individual variability in beginning this stage ranged in this study from 22 weeks to 1 year. 3) Multiple attachment - several months after the beginning of specific attachments, a broadening of attachments began, first to one other, and then several. In this study, it was primarily to relatives such as father, sibs, grandparents, etc. In spite of individual variability, only 13% of babies studied were still exclusively attached to one person at 18 months of age. There were other findings with particular significance for infant day care. Mothers whose interaction with their children was more intense tended to have infants who were more intensely attached to them. Maternal availability to child did not differentiate significantly infants who formed specific attachments to mother from those attached to more than one person. Regardless of the nature of the mother-child relationship, infants who had extensive contacts with other people showed a pattern of broader attachments than did infants whose contact with other adults was limited.

Ainsworth (1967) has investigated differences in the nature of attachment in Ugandan babies, and found differences on the variable defined as security of attachment. The securely attached child shows positive signs of attachment such as smiling at the sight of mother, reaching out arms to be picked up, increased vocalization with mother, and more frequent visual contact. However, this child is also able to leave mother for brief periods to explore the environment, and does not protest when left for brief periods. This child seems to cry less overall and seems generally content. The insecurely attached child cries a great deal, even when being held by mother. This

child demands mother's attention, clings to her, and shows considerable distress when she leaves. The unattached baby seems to develop no attachment to mother or any adult person. This research suggests that the optimal attachment would the secure attachment, as it leaves the child more free to explore the environment, while the insecurely attached child seems more preoccupied with emotional needs. L. Yarrow (1964) has supported this view, suggesting that the "infant's differentiation of himself from the mother, the child's development of a separate identity and increased autonomy in coping with the environment are aspects of growth which are dependent on mild doses of separation." (p. 93.)

Ainsworth (1967) in her study also attempted to establish the correlates of strength of attachment and found no relationship between strength of attachment and warmth of mother, care by people in addition to mother, or use of scheduled vs. demand feeding. There was a significant relationship between strength of attachment and total amount of care given by mother, positive attitudes toward breast feeding, and mother's excellence as an informant. She also suggested later that an important variable referred to by this data is sensitivity to an infant's signals (Ainsworth, 1973). The absence of those variables correlated with strong attachment might then be seen as resulting, to a greater or lesser degree, in maternal deprivation.

In considering maternal deprivation, however, it is important to make a distinction between the effects of forming an insecure attachment, or no attachment at all, and the effects of separation from caretaker during or after the formation of an attachment. If such separation occurs in a relationship where there is no attachment, it is assumed there would be no adverse effects. However, in cases of separation during or after attachment, it is inferred that the baby may suffer, to a greater or lesser degree, from maternal deprivation. L. Yarrow (1964) suggests that whether in fact such deprivation will occur seems not to be dependent on the actual separation as much as upon other variables. Those variables involve such things as the nature of the maternal relationship prior to separation, whether the separation is partial or complete, how long the separation lasts, whether the separation is accompanied by external stress, and the nature of the substitute care. This raises the question of the relationship between attachment and short-term separations, day-to-day, such as those caused by maternal employment.

Maternal Employment and the Infant-Mother Relationship

Direct attempts to study the effects of maternal employment during the child's infancy have been few. There are difficulties encountered in trying to do such research, which have probably accounted for the small number of such studies. One difficulty is that even if differences are found in functioning between children during infancy, it is difficult if not impossible to interpret these in terms of long range consequences, because of the intervention of a myriad of confounding variables. Also, maternal employment during infancy is not yet a typical or commonly accepted situation. Those mothers who do place infants in care do as a result of personal or environmental circumstances which then make it difficult to ferret out the effects of maternal employment per se.

In most such studies, focus has been on the effects of "intervention" programs on the development of cognitive skills in disadvantaged children. This is perhaps as a justification for the feeling that one should not remove such young things from their mothers unless it can be shown to benefit the infants more than it does the mothers. While these studies are related to the concern of attachment, they do not focus particularly on the affective domain and therefore will not be considered here. Their exclusion should not be taken to imply that they are not important to the overall issue of day care for infants, however.

In a study on infant day care and attachment, Caldwell et al., (1970) compared a group of 23 home-reared children and a group of 18 children enrolled in an infant day care center. They were examined at 30 months of age for differences in child-mother and mother-child attachment patterns. No significant differences were found between the two groups. Using a developmental quotient, it was found that there was a significant positive correlation between developmental level of the child and strength of attachment of child to mother. Also, children with stronger attachments were found to have a greater amount of stimulation and support for development available in the home. This was true irrespective of which groups the child was in. Hence, quantity of time in the home seemed not to be an important variable.

In a review of the effects of maternal employment on the child, Hoffman (1974) presents a hypothesis which is relevant here, that the mother's emotional state is influenced by whether or not she is employed, and this affects her interaction with her

children. A study by M. Yarrow et al., (1962) of child rearing practices shows that it is not the fact of working or not working which is significant, but rather the mother's feelings about her work status. The greatest problems in child rearing were found in that group of mothers who wished to work, but did not out of "duty." They described having greater difficulties in control, less emotional satisfaction in their relationships with their children, and less confidence in their functioning as mothers. There were not significant differences between working mothers who wished to work and those working mothers who did not wish to, in their child rearing practices. The overall conclusion of the authors was that the variable to be considered is not whether a mother works, but rather the attitude which she and others in the family hold about her working.

Hoffman (1974) suggests that other studies in this area show that children's attitudes toward mother's employment relate to how much conflict or strain the work-role places on the mother, or whether it places strain on the family. The working mother of small children who enjoys working may feel guilty about her work and thus overcompensate, with adverse effects on her children in the form of passivity, ineffectiveness with peers, and low academic performance. In summary, the mother's emotional state, as influenced by her liking of her job, her sense of guilt, the extent to which work places a strain on her or the family, all seem to be relevant variables to its effect on the child. But Hoffman concludes in her review that the fact of working or not working itself does not appear to be relevant to the relationship with children. It seems appropriate to consider the above research in light of our current knowledge and attitudes about infant day care.

What Are the Qualities of Good Infant Day Care?

Infant day care is here to stay in this country. Of all children in day care (not just infants) 61% are cared for in the child's own home or by relatives, 31% are in family day care homes, and 8% are in center care, (Prescott, 1978). It is probably safe to say that infants are more strongly represented in the 61% in private care, than they are in the 39% in group care, and that they compose a very small proportion of the 8% in center care. Perhaps the reason for the small percentage in such care is due in part to the prevalent attitude that it will result in social/emotional problems for children. It may also be due to the lack of availability of quality group care

for infants throughout the country. In view of the early research, it is not surprising that the general attitude of parents and others reflect a misunderstanding of maternal deprivation and how it comes about. Most early research focused on institutional care of children, usually those experiencing complete, or at least long-term separation from mother to whom they had already become attached, or else children who had never had an opportunity to become attached due to severe trauma in their environment. As the research reviewed in this paper has shown, that situation is not analagous to the situation of a child placed in stimulating daytime care and returning home each evening.

Maternal deprivation needs to be viewed as a quality of relationship between infant and caretaker, not simply as a matter of timing or quantity of interation. Although research exists to support the view that infants placed in quality group day care are not generally deprived, it may take the experience of several generations to remove the prevalent attitude in society toward such care, and toward mothers who use such care whether by necessity or by choice. In fact, this change in attitude seems particularly necessary if infant day care is to succeed, for it is clear from the research considered here that it is the attitude of the mother to her separation from children, and the quality of stress accompanying her placement of them in care which may be most influential in their healthy emotional adjustment to that placement. As the situation currently exists, many if not most mothers who use such care feel varying degrees of guilt about their decision. Until means can be devised for assessing the long-range correlates of early placement, it may be difficult to remove that guilt. But current research certainly suggests that early emotional development, particularly attachment, need not be adversely affected.

Another implication of the research considered concerns the quality of day care offered. We have rather direct data to suggest what are the maternal characteristics which seem to correlate with healthy development of infants and children. We know that: "custodial care" is not sufficient for a child's optimal development; a caregiver should express warmth and positive emotion toward the child; quantity of relationship is not as important as the quality of interaction; physical stimulation (contact) is important for the infant; stimulation

available in the context of play is most desirable; and sensitivity and responsiveness of adult caregiver may be the most important variables influencing the child's progress (Fein, 1973). In view of these findings, the decision of most mothers to place infants with friends or relatives, or in day care homes is probably well grounded. However, there is no reason why group care couldn't provide the same quality of care. Likewise, there is no assurance that home care is providing such quality.

An alternative to increasing the numbers of children in center day care might be to focus more strongly on the role of the day care home. Little research has been done in this area, but is seems a more acceptable option for many parents who may be unable to arrange private care, or may be unable to afford it. Again, just the fact that an infant is cared for in a home, by one individual, does not assure that the infant will receive the optimal combination of maternal characteristics discussed above. However, a recent study by Prescott (1978) suggests that physical environment of the home, by its relatively more open structure, may increase the likelihood of positive interactions between children and caregivers, as well as between children of different ages, than would center care. Also, if mothers and others around them feel better about this arrangement, it is likely to have a positive effect on the infant-mother relationship. In this sort of situation the day care home may serve as part of a support system for the family.

The idea of infant care providing a support system for the family unit is another implication of the research. The relationship between parents and daytime caregivers should be one of mutual respect and openness. Too often it would seem that parents feel at least somewhat guilty about leaving their children in the care of others. Some may therefore work harder to give quality parenting when they are with their children, and others may overcompensate and produce problems. Parents often know little about what happens with their child during the day however, and may feel that they are missing important aspects of the child's development. Rivalry between parents and substitute caregivers is not infrequent. Infant caregivers particularly need to confront and deal with their feelings about mothers who would leave their infants in the care of others, in order to facilitate a family-supportive relationship. A caregiver who does not see herself as an extension of the family, but

rather as a substitute, is not really helping to support the family, and thus enhance the healthy emotional development of the infant. This is an area which this author feels clearly needs further study.

Finally, the research considered here suggests that we might well take a serious look at our assumptions about the preferability of single attachments for infants in our society. It has been shown that infants who have contact with only one caretaker generally develop an attachment primarily to that person. Infants who are exposed consistently to several regular caretakers more readily reflect an attachment to several, resulting in the child moving more easily and comfortably from one caretaker to another with no apparent adverse effects. In our highly urbanized society where contact with others is frequent, and ability to get along with a wide range of others is a necessity, might not multiple attachments better prepare a child for later life experience? Margaret Mead wrote about this in 1957:

> We have not yet developed a method of bringing up our children so that they can journey easily, alone if necessary, to Hong Kong or Nigeria or the moon, tolerating without fear strangers who look, speak, move and smell very different. In a situation where the mother must take the child day by day to market, to the clinic, on the bus, on the underground, among strangers, the present tendency to advise very close ties between mother and child is doubtfully the best. Wider experiences in the arms of many individuals known in different degrees of intimacy, if possible of different races, may be much better preparation.

There is no longitudinal research to support this effect, but it seems a reasonable conclusion, and one worth careful consideration in a time when emotional problems in adults and children seem on the increase.

While research on attachment is not in agreement, and its implications for day care are even less clearly understood, there seems to have been a significant shift in the current literature in the direction of delineating those characteristics of infant-mother relationship which seem to result in healthy development, and these findings can and must be made known to parents and

other caregivers. The issue is not one of day care or no day care, but rather of making use of our understanding of the special qualities of the optimal infant-adult relationship in order to facilitate the development of infants into emotionally healthy adults. This is true whether infants are cared for in center group care, day care homes, private homes, or exclusively by their own parents.

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LISTENING COMPREHENSION, READING COMPREHENSION AND IN BETWEEN

Peter Winograd

Is it reasonable to assume that effective listening and reading involve identical comprehension processes? Furthermore, is it reasonable to assume that listening comprehension and reading comprehension are mutually transferable; that is, does improvement in one result in an improvement in the other? The purpose of this paper is to examine the difficulties involved in studying the transfer of training between listening comprehension and reading comprehension.

This topic is an important one. The relationship between written and oral language has been identified as a research topic of fundamental importance by Carroll (1976) and MacGinitie (1975). Recently, The Reading Research Quarterly devoted almost an entire issue to "rauding theory" which is concerned with the comprehension processes behind reading and auding (a term used to refer to listening with comprehension). Knowledge about the transfer of training can contribute much to the understanding of the relationship between listening and reading. Danks (1974) pointed out that if reading and listening are handled by a single process, them improvement in one would result in an improvement in the other. However, if reading comprehension is distinct from listening comprehension, or if the two processes overlap only slightly, then the transfer would be minimal.

Knowledge about the transfer of training could also supply the reading teacher with a potent method of instruction. It might be easier to teach some children some comprehension skills through listening than through reading. Cunningham (1975) used a listening-reading transfer lesson to teach her students that the kinds of questions they could answer after listening to a passage were the same kinds of questions they were asked after reading a similar passage. Cunningham mentioned that "finding the main idea" and "noting sequence" were examples of the kinds of comprehension lessons common to both listening and reading exercises.

This paper is divided into two parts. The first deals with the issues involved in listening comprehension, reading comperhension, and the relationship between them. The second section is an evaluation of the experimental studies of transfer of training.

Basic Issues In Comprehension

The issues surrounding listening comprehension and reading comprehension are reflections of two fundamental and interrelated questions about language comprehension in general: What is language comprehension? How is it to be measured? These two questions are so closely related that it is difficult to deal with one without recourse to the other. This is evident when one attempts to understand the models of language comprehension.

Singer and Ruddell (1976) have stated that "Models should first be understood in relation to their purpose, what they are trying to explain..." (p. 450). A major difficulty with the models of language comprehension is that they have served two different purposes. Some, known as process models, have focused on cognitive processes as a way of defining comprehension. Others, the product models, have focused on the results of cognitive processes as a means of measuring comprehension or its sub-components. Because of this difference in perspective, it is difficult to gain a balanced view of comprehension.

Massaro (1977) provided an example of a process model. The goal was to describe in detail all the steps necessary to take the language user from the written or spoken message to meaning. These steps were analyzed in terms of their structural and functional components. The structural components refer to the information available at each stage of processing. The functional component refers to the cognitive procedures and processes that operate on the information contained in the corresponding component. Process models are different from other models of comprehension because their emphasis is on how the reader and listener comprehend; that is, what is involved in the process of comprehending. While there are several variations of information-processing models, most rely on a cognitive flow chart analogy with print or speech as input and comprehension as output.

Contrast Massaro's view with an example of a product model emphasizing the results of comprehension. Clark (1972) provided a model that was useful in measuring listening and reading comprehension. The basic premise was that the proficiency of elementary school pupils in listening and reading comprehension is related to measurable skills which could be ordered hierarchically. Examples of these measurable skills

are the ability to find the main idea, the ability to follow directions, and the ability to draw inferences. Product models differ from process models because their focus is not on how the pupil comprehends, but rather can the pupil do tasks that require particular aspects of comprehension.

Massaro and Clark illustrate the division between those primarily interested in the definition of comprehension and those primarily interested in the measurement of comprehension. Yet both views are relevant to the understanding of listening comprehension, reading comprehension, and the relationship between them.

Lundsteen (1971) carried out a study of listening that is noteworthy not only because of its depth, but also because it shows how the product and process models can be combined. While this study focused on listening, it is applicable to reading and language comprehension. The stated objective was to "present a broad complex concept of listening and its interrelationships according to the state of present knowledge and speculation (p. 45). Listening was analyzed in terms of its parts, how it operates and compares to the other language activities of reading, writing and speaking.

Lundsteen's approach resulted in a multi-faceted definition that avoided some of the distortions that are common with definitions that are based on just one perspective. But it must be kept in mind that the questions concerning the definition and measurement of comprehension have not been answered adequately (Carroll, 1972; Farr, 1969).

Since reading comprehension and listening comprehension have yet to be understood separately, it is not surprising that the relationship between them is still unclear. There seems to be just one major theoretical issue concerning the relationship between listening and reading: Do listening comprehension and reading comprehension involve the same cognitive processes or do they rely on distinct, perhaps overlapping, processes (Danks, 1974)?

The idea that reading comprehension and listening comprehension involve the same processes has long been popular in the field of reading. "To reach the meaning of any recorded speech - i.e., written language - we must in a sense "listen" to the sentence much as we do when we hear someone speaking...To read is to restore the voice of the printed page" (Gattegno, 1968, p. 3).

The opposite view, that reading and listening involve distinct processes, is typified by Smith (1973). "Written language is not speech written down... Whatever the definition (of language), however, writing and speech stand at an equivalent level to each other and not in any hierarchial relationship" (Mosenthal 1977, pp 57).

These opposing views have some important implications. The assumption that reading is decoding plus listening has has a great deal of influence. Several approaches to beginning reading use this idea as their cornerstone. SRA Basic Reading Series and the Merrill Linguistic Readers are two of the better known examples. This assumption has also been influential in the testing of reading potential. Bormuth (1972) stated, "In the tradition and folklore of reading instruction, a student's ability to comprehend spoken language is regarded as an estimate of the upper limit of his capacity to learn reading skills" (p. 1143).

If, however, listening and reading are not based on the same processes, then what? Two implications have been studied that are particularly relevant to educators. (1) What are the differences between listening and reading? (2) Which is more effective, listening or reading?

Kleiman and Schallert (1977) identified five features distinguishing speech from writing. (1) Speech contains prosodic cues (intonation, stress, and rhythm) which help the listener to comprehend, while writing has none. (2) Spoken language usually happens in face-to-face encounters and speakers are able to interact with each other. Readers must learn to compensate for this loss of nonlinguistic context. (3) Speech is used more often than writing for interpersonal communication. Thus, listeners, especially young children, may have stronger motivations than do readers. (4) Speech and writing tend to differ in terms of syntactic complexity, vocabulary, and amount of redundancy. (5) Speech is transitory while writing is more permanent. This allows the reader to read and reread at will.

The other implication of interest to educators was explored in a study by Day and Beach (reviewed in Duker, 1966). They asked which were more effective, auditory or visual presentations? They found that the literature supported several conclusions. Auditory presentations were more

effective than visual presentations when the material was familiar, well-organized, or when testing took place after a long delay. Visual presentations were more effective if the material was meaningless, unfamiliar, or comparatively discrete and unrelated. The greater the intelligence, the greater the reading ability, the older the subject, the greater was the effectiveness of a visual presentation. A combined visual and auditory presentation was more efficient that either alone. Even though the Day and Beach study reviewed literature which was published from 1894 through 1936, their conclusions are supported by the findings of more recent studies (Witty and Sizemore, 1958).

The major conclusion to be drawn from this review of the issues involved with reading comprehension, listening comprehension, and the relationship between them is that there is no consensus on how comprehension is to be defined or measured. Just how important this conclusion is, will become evident in the next section.

Empirical Studies of the Transfer of Training

How well have researchers dealt with the problems involved in studying the transfer of training between listening and reading comprehension? In order to answer this question approximately forty experimental transfer of training studies were evaluated along two dimensions: how was comprehension defined (which skills were trained) and how was any possible transfer measured.

A majority of the transfer of training studies have been master's theses and doctoral dissertations, with the results of these studies almost evenly divided. A review by Sticht, Beck, Hauke, Kleiman, & James (1974) illustrated this split. Of the 31 studies reviewed, 15 found a significant transfer effect, 14 did not, and 2 were not analyzed. Other reviews have reported equally divided conclusions (Cooper, 1969; Danks, 1974; Devine, 1968; Durrell & Murphy, 1953; Reddin, 1969). For example, Danks (1974) noted that three previous reviews concluded that there was a transfer effect and three others concluded there was not. Devine (1968) said there was not enough evidence to support the transfer of training hypothesis and Sticht et. al., (1974) said there was.

These results are not surprising when one considers the problems inherent in the study of transfer between listening and reading. The questions dealing with the definition and measurement of comprehension are again evident. The experimental studies approached these two questions in a variety of ways.

How was comprehension defined in these studies? Which skills were choosen for training? Some of the studies concentrated on the ability to recall events, ideas, or details. Some focused on very general skills such as drawing conclusions and getting the main idea, while one (Engelmann & Bruner, 1974) dealt with the very specific ability to segment speech at the phoneme, syllable, and word level. Others included training in vocabulary or the ability to follow directions. There are two major problems when comprehension is defined in this manner. First, Carroll(1974) has pointed out the difficulty in determining the existence of distinct subskills, such as those mentioned above, in either listening or reading comprehension. Second, as Reddin (1968) has shown, the degree of correspondence between the skills taught and the skills tested is crucial.

This introduces the problem of measurement in the study of transfer. Danks (1974) provided the clearest description of the difficulties. "Many of the studies...assessed transfer of training via standardized tests. These tests claim to measure an individual's listening and reading performance at that point in time. However, selecting a standardized test, an investigator cannot assume that a test measures what it purports to measure especially as encoded in its norm...In most transfer of training designs... the emphasis was on tests of general reading skill. This rationale frequently assumes that listening and reading are rather homogeneous skills, or even a single skill" (p. 29-30).

It is hard to overestimate the seriousness of the problems of defining and measuring comprehension in experiments such as those discussed above. The success of these experiments depends upon the ability to make fine discriminations with coarse instruments in an area whose boundaries have yet to be set. Thus the experimental research into the transfer of training has been based on three very tentative assumptions. (1) Listening and reading comprehension are comprised of clearly discernable subskills. (2) These clearly discernable subskills can be taught seperately. (3) The present technology

of testing is capable of validly measuring these comprehension subskills.

It appears, then, that research neither supports nor rejects that assumption that identical comprehension processes are involved in both listening and reading. Research provides even less information about the transfer of training assumption. Future research should focus on developing models of comprehension that allow for the identification and measurement of those aspects of comprehension which are particularly relevant to education. Until an accurate model of language comprehension has been developed and a corresponding technology of testing has been validated, opinion and intuition will have the final say.

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REVIEW OF SCIENCE OF EDUCATION AND THE PSYCHOLOGY OF THE CHILD

Shirley Kessler

The Science of Education and the Psychology of the Child represents one of the few attempts by Jean Piaget to apply his theory of intellectual development to the field of education. After reading this fairly short volume (under 200 pages and available in paperback by Penguin), it becomes understandable why he resisted for so long the call from educators for a direct application of his theory. Piaget's theory is respectably elaborated as far as genetic epistemology is concerned. He is not nearly so sophisticated in explicating the problems and issues dealt with in much of this book: namely, pedagogical research, the philosophy of education, and theories of curriculum development.

The book is divided into two parts. Part I dates from 1965 and is intended to present a discussion and "total evaluation of our present pedagogy from the double point of view of methods and programs. It poses a problem of civilization." (Publisher's Forward). One immediately wonders how a total evaluation of such a grand system and the problems it poses for civilization can be accomplished in so few pages. So, reader, get set for a rather cursory, and at times naive, overview of these important matters. Most of this section is reminiscent of arm-chair philosophizing, of interest to those present, perhaps, but of questionable worth to professionals who seriously study these problems.

Part II was originally written in 1935 and focuses on the discoveries of genetic psychology, its importance to the field of pedagogy, and the connection of these discoveries with the "active" educational method Piaget advocates. The interested reader would do well to study this part, as it offers insight into the application of the theory to teaching. However, Chapter 2 in Part I also presents an application of the theory to methodology and is clearer and more fully developed, perhaps, than the earlier account.

According to Piaget, the aims of education are twofold: 1) to aid the individual in adapting to his

surrounding social environment; and 2) to meet the future needs of society in terms of vocational training. To accomplish these purposes schools must facilitate the development of "an experimental attitude of mind." (p. 92) This quality can best be cultivated by an "active" method of teaching, the broad characteristics of which can be ferreted out of a poorly organized text. The particulars of such a program, however, are not articulated.

Piaget maintains that it is up to the practitioner, working in conjunction with the researcher, to determine which educational methods work best. As far as curriculum content is concerned, he states that what one teaches ought to be determined by representatives from the content areas, teaching groups, and the field of psychology. He asserts that a dialogue needs to be created among the members from three concerned factions - the pedagogical experimenter, the practitioner, and educational authorities - to determine the exact goals of a program, its content, and the most appropriate methodology.

While these recommendations appear quite reasonable, they leave this reader with an uneasy feeling which will not go away. Piaget reproaches educators for being ignorant of the results of their endeavors, lacking in an elite of researchers, and deficient in "scientific dynamism." His impatience is evident. One can almost hear him shouting, "What's the matter with you educators? Why aren't you going about your business in a respectfully scientific way? What's taking you so long? Get going!" He appears to believe that the research methods appropriate for studying the physical world (and the natural world of biology) are also appropriate for the study of the social world and of individuals. Some would disagree, however, and maintain that experimental pedagogy requires different research methods, new theoretical constructs, and unique measurement techniques. We are not as inefficient as Piaget would have us believe, after all, but rather seriously at work on profound questions, of the nature of which he seems to be unaware.

More uneasiness is felt when contemplating the aims of education which, according to Piaget, ought to be determined by authorized opinions, empiricism, or become the

object of systematic study. "To educate is to adapt the child to the adult social environment...to change the individual's psychobiological constitution in terms of the totality of the collective realities to which the community consciously attributes a value" (p. 137). Is Piaget advocating, on the one hand, an active approach which would free the child to discover, invent, and create knowledge; while, on the other, fixing the limits of activity to that which has been determined by authorized opinion and/or the results of empirical enquiry? Is he saying that we can free the thinking of children, so long as the products of endeavors are socially useful? Piaget seems to be attracted to egalitarian views. But is it possible that he is unable to free himself from an elitist orientation common to some European intellectuals? Wouldn't most of us agree that the aims of education are more inclusive than the training of the individual to adapt to his environment and to perform a socially useful function? What about the notion of education to enrich and give one's life a fuller meaning? Ought the aims of education to be fixed by a designated body of professionals? Is adjustment to life simple adaptation to one's environment?

Piaget's view of the aims of education may appear narrow to some because of the constraints of his epistemology. "Genetic epistemology attempts to explain knowledge, and in particular scientific knowledge..." (p. 1, Piaget, 1970). Aren't there other forms of knowledge? What about illogical thought which does not grow out of the sciences, but might be vital to the work of the artist? What about intuitive knowledge? Ethics? Religion? Where do these "realms of meaning" (Phenix, 1964) fit into the curriculum? "There are many different logics, not just a single logic. This means that no single logic is strong enough to support the total construction of human knowledge." (p. 10-11, Piaget, 1970) Is "logic" a substitute for "knowledge"? Or does "logic" refer to logico-mathematical structures? If Piaget does admit to the existence of other forms of knowledge and value their inclusion in the school curriculum, he pays such a concern only minimal respect.

In all fairness, it must be pointed out that Piaget does acknowledge the need for adequate amount of time for each of the "arts" subjects (though again for the purpose

of developing an experimental attitude of mind). However, when he attempts to elaborate on this subject, his statements sound like borrowed rhetoric and make little sense. The reader is left with a feeling of frustration at having to read a phrase several times and feel he has still not comprehended its meaning. As in his other works, Piaget has not written clearly and concisely.

Piaget portrays his sensitivity to the workings of the mind when he discusses teacher training. He states that teachers should be trained at universities, where they can participate in experimental research with professionals, and from this experience raise the level of teaching from that of merely transmitting knowledge, to fostering critical thinking in children. His comments on the evaluation of children also show much insight.

When Piaget elaborates on the growth of knowledge in children, his work is highly respectable. When he attempts to philosophize concerning the aims of education, comment as to the methodology of pedagogical experimentation, and dictate the content of curriculum, his ideas are not so well researched. However, his worth to education should not be judged solely on this one volume in which he addresses educators directly. Nor should this book detract from his tremendous contributions to our field.

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